Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		10/664,071	POYKKO ET AL.
		Examiner	Art Unit
		Michael Vu	2683

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13/09/2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _17 September 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed September 13, 2005 have been fully considered but they are not persuasive.

Applicant argues or alleges the following claims 1, 3, and 5. The Vanderspool and Riley do not teach or suggest the analyzing "an effect of ignoring a measurement" to identify suspicious.

In response to applicant's arguments as stated above, the examiner respectfully disagrees with Applicant on this point. Riley teaches the system uses the position fixes of mobile stations and terrestrial ranging information to determine, measurement, compute distance, and compare the value and error estimate between Mobile Station and Base Station using signals transmitted between MS and BS. And Riley further teaches the method of measurements, which are inconsistent and consistent steps in order to improve continuously the value of the base station position and timing offset.

Furthermore, Riley further teaches analyzing an effect of ignoring a measurement to identify suspicious. Therefore, examiner interpreted that Riley teaches how to compute and compare the measurement between BS and MS. In the case of inconsistent equals bad values/numbers are recorded when the error threshold is reached, eg. the threshold is set the value number from 1 to 10, if the number 25 appeared in the measurement then number 25 will be ignored or thrown it out (see Fig. 9, [0083]).

Applicant argues or alleges the following claims 12, and 17. The Vanderspool

and Riley teach a method for providing location information to a user in a

communication system, the method comprising: controlling at least one base station;

providing a client application with a measurement regarding geographic location

information of at least one mobile station; receiving the measurement of the geographic

location information of the at least one mobile station; transmitting the measurement of

the geographic location information to a location means for providing location services;

determining a location estimate based upon the measurement regarding the geographic

location; and identifying suspicious measurements by analyzing a discrepancy between

the measurement and the location estimate.

In response to applicant's arguments as stated above, the examiner respectfully

disagrees with Applicant on this point. However, Riley teaches how to compute and

compare the measurement between BS and MS. In the case of inconsistent equals bad

values/numbers are recorded when the error threshold is reached (Fig. 9, [0012-0014,

0063, 0083].

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Riley. (see Claim Rejections below).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Vanderspool (US 6,108,558) in view of Riley (US 2003/0125046).

        Regarding **claim 1**, Vanderspool teaches a method of providing information

regarding a location of a mobile user of a communication system (C1, L25), the method

comprising: performing measurements for provision of input data for a location

calculation function (C1, L41-44), **but fails to teach** to analyzing the measurements to

identify suspicious measurements; deciding selected measurements for use by the

location calculation function; and calculating a location estimate for a mobile user based

on the selected measurements. However, Riley teaches to determine a number of

quality signals with a measurement of signal transmission between the mobile station to

base station based on this measurement error estimates can be combined in the

navigation –processing algorithm to estimate the error in the determination if each

positions. (Fig. #8 and #9 shows compute/compare distance measurement / record and

report error), [0013, 0015, 0065, 0071, 0080, 0083]). "An effect of ignoring a

measurement (see measurement is ignored [0040, 0083])"

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that to analyzing the

measurements to identify suspicious measurements deciding selected measurements

for use by the location calculation function and calculating a location estimate for a

mobile user based on the selected measurements, to improve location calculations that

are based on location measurement data, and to reduce the location error and check for

to throw out bad measurements.

Regarding **claim 2**, Vanderspool teaches in claim 1, **but fails to teach** wherein

the step of analyzing further comprises analyzing a discrepancy between the selected

measurements and the location estimate. However, Riley teaches the network

computes the distance between the MS to BS from know positions, which compare the

distance to the pseudorange measurement. If the distance is inconsistent with the

measurement or error estimates of the distance, then execution branches record the

erroneous. If a number of such inconsistencies are recorded, the execution continues

to record the error in a log (Fig. #9 / inconsistent, element 122, [0083] the examiner

broadly interprets as analyzing discrepancy).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that wherein the step of

analyzing further comprises analyzing a discrepancy between the selected

measurements and the location estimate, to significantly improve the accuracy of the cellular location method.

Regarding **claim 3**, Vanderspool teaches a communication system comprising (Fig. #1): a measuring device configured to perform measurements for provision of input data for a location calculation function (C1, L41-44); **but fails to teach** an analyzer configured to analyze the measurements to identify suspicious measurements; a deciding unit configured to decide selected measurements for use by the location calculation function; and a calculating device configured to calculate a location estimate for a mobile user based on the selected measurements. However, Riley teaches to determine a number of quality signals with a measurement of signal transmission between the mobile station to base station based on this measurement error estimates can be combined in the navigation –processing algorithm to estimate the error in the determination if each positions. (Fig. #8 and #9 shows compute/compare distance measurement / record and report error), [0013, 0015, 0065, 0071, 0080, 0083]). "An effect of ignoring a measurement (see measurement is ignored [0040, 0083])".

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vanderspool, such that to analyzing the measurements to identify suspicious measurements deciding selected measurements for use by the location calculation function and calculating a location estimate for a mobile user based on the selected measurements, to improve location calculations that are based on location measurement data, and to reduce the location error and check for to throw out bad measurements.

Regarding **claim 4**, Vanderspool teaches in claim 3. **but fails to teach** wherein

the analyzer analyzes a discrepancy between the selected measurements and the

location estimate. However, Riley further teaches the network computes the distance

between the MS to BS from know positions, which compare the distance to the

pseudorange measurement. If the distance is inconsistent with the measurement or

error estimates of the distance, then execution branches record the erroneous. If a

number of such inconsistencies are recorded, the execution continues to record the

error in a log (Fig. #9 / inconsistent, element 122, [0083] the examiner broadly interprets

as analyzing discrepancy).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that wherein the step of

analyzing further comprises analyzing a discrepancy between the selected

measurements and the location estimate, to significantly improve the accuracy of the

cellular location method.

Regarding **claim 5**, Vanderspool teaches a communication system comprising

Fig. #1): measuring means for performing measurements for provision of input data for

a location calculation function (C1, L41-44); **but fails to teach** analyzing means for

analyzing the measurements to identify suspicious measurements; deciding means for

deciding selected measurements for use by the location calculation function; and

calculating means for calculating a location estimate for a mobile user based on the

selected measurements. However, Riley teaches to determine a number of quality

signals with a measurement of signal transmission between the mobile station to base

station based on this measurement error estimates can be combined in the navigation –

processing algorithm to estimate the error in the determination if each positions. (Fig.

#8 and #9 shows compute/compare distance measurement / record and report error),

[0013, 0015, 0065, 0071, 0080, 0083]). "An effect of ignoring a measurement (see

measurement is ignored [0040, 0083])".

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that to analyzing the

measurements to identify suspicious measurements deciding selected measurements

for use by the location calculation function and calculating a location estimate for a

mobile user based on the selected measurements, to improve location calculations that

are based on location measurement data, and to reduce the location error and check for

to throw out bad measurements.

Regarding **claim 6**, Vanderspool teaches the communication system as recited

in claim 5, Riley further teaches wherein the analyzing means is further configured for

analyzing a discrepancy between the selected measurements and the location estimate.

(Fig. #8 and #9 shows compute/compare distance measurement / record and report

error), [0013, 0015, 0065, 0071, 0080, 0083]). (Fig. #9 / inconsistent, element 122,

[0083] the examiner broadly interprets as analyzing discrepancy).

Regarding **claim 7**, Vanderspool teaches a location system (Fig. #1, C1, L15-66

teaches mobile/ cellular location finding methods (ie. TDOA, TOA, OTD, RTD, GPS

comprising: a controller configured to control at least one base stations (Mobile Location

Center (MLC)); a location service node configured to provide a client application with a

measurement regarding geographic location information of at least one mobile station

(MLC, element 111); an interface configured to receive the measurement regarding the

geographic location information of the at least one mobile station and to transmit the

measurement regarding the geographic location information to a location device (Fig.

#1, C4, L6-15); the location device configured to determine a location estimate based

upon the measurement regarding the geographic location (Abstract, C2, L35-41); **but**

fails to teach a suspicious measurement identifier configured to identify suspicious

measurements by analyzing a discrepancy between the measurement and the location

estimate. However, Riley teaches to determine a number of quality signals with a

measurement of signal transmission between the mobile station to base station based

on this measurement error estimates can be combined in the navigation –processing

algorithm to estimate the error in the determination if each positions. (Fig. #8 and #9

shows compute/compare distance measurement / record and report error), [0013, 0015,

0065, 0071, 0080, 0083]).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that a suspicious

measurement identifier configured to identify suspicious measurements by analyzing a

discrepancy between the measurement and the location estimate, to improve location

calculations that are based on location measurement data, and to reduce the location

error and check for to throw out bad measurements.

Regarding **claim 8**, Vanderspool teaches in claim 7, he further teaches wherein the location service node provides location services for a plurality of client applications (Fig. #1, element 111, Mobile Location Center (MLC) / Location Service Node (LSN)).

Regarding **claim 9**, Vanderspool teaches in claim 7, he further teaches wherein the interface comprises a gateway mobile location center (Fig. #1, element 111, MLC / acting as a gateway).

Regarding **claim 10**, the combination of Vanderspool and Riley teach in claim 7, but Riley further teaches wherein the location estimate is based upon a measurement regarding a position of the at least one mobile station relative to the at least one base station (Fig. #9, [0083] of Riley).

Regarding **claim 11**, the combination of Vanderspool and Riley teach in claim 7, but Riley further teaches wherein the location device comprises the suspicious measurement identifier (Fig. #9, [0083] of Riley).

Regarding **claim 12**, Vanderspool teaches a method for providing location information to a user in a communication system (Fig. #3), the method comprising: controlling at least one base station (Fig. #3, element 309 / MLC); providing a client application with a measurement regarding geographic location information of at least one mobile station (Fig. #3, C4, L6-15); receiving the measurement of the geographic location information of the at least one mobile station; transmitting the measurement of the geographic location information to a location means for providing location services (Fig. #3, C1,L23-26); determining a location estimate based upon the measurement regarding the geographic location (Fig. #3, C2, L43-46); **but fails to teach** to identifying

suspicious measurements by analyzing a discrepancy between the measurement and

the location estimate.   However, Riley teaches to determine a number of quality signals

with a measurement of signal transmission between the mobile station to base station

based on this measurement error estimates can be combined in the navigation –

processing algorithm to estimate the error in the determination if each positions. (Fig.

#8 and #9 shows compute/compare distance measurement / record and report error),

[0013, 0015, 0065, 0071, 0080, 0083]). (Fig. #9 / inconsistent, element 122, [0083] the

examiner broadly interprets as analyzing discrepancy).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that a suspicious

measurement identifier configured to identify suspicious measurements by analyzing a

discrepancy between the measurement and the location estimate, to improve location

calculations that are based on location measurement data, and to reduce the location

error and check for to throw out bad measurements.

Regarding **claim 13**, the combination of Vanderspool and Riley teach in claim 12,

Vanderspool further teaches comprising a step of providing location services for a

plurality of client applications (C2, 60-64 of Vanderspool).

Regading **claim 14**, the combination of Vanderspool and Riley teach in claim 12,

Vanderspool further teaches comprising a step of providing a gateway mobile location

center for providing said client application (C2, 29-34 / MLC=LSN=Gateway).

Regarding **claim 15**, the combination of Vanderspool and Riley teach in claim 12,

Vanderspool further teaches the step of determining further comprising a step of

calculating the location estimate based upon a measurement regarding a position of the

at least one mobile station relative to the at least one base station (C2, 39-46 of

Vanderspool).

Regarding **claim 16**, the combination of Vanderspool and Riley teach in claim 12,

Riley further teaches comprising a step of providing a location device for identifying the

suspicious measurements (Fig. #9, [0083] of Riley).

Regarding **claim 17**, A location system comprising (Fig. #1): controlling means

for controlling at least one base stations (Fig. #1 / MLC); a first providing means for

providing a client application with a measurement regarding geographic location

information of at least one mobile station (Fig. #1, C4, L6-15); receiving means for

receiving the measurement regarding the geographic location information of the at least

one mobile station; transmitting means for transmitting the measurement regarding the

geographic location information to a location means for location services (Fig. #1, C1,

L23-26); determining means for determining a location estimate based upon the

measurement regarding the geographic location (Fig. #1, C2, L43-46); **but fails to**

teach to identifying means for identifying suspicious measurements by analyzing a

discrepancy between the measurement and the location estimate.   However, Riley

teaches to determine a number of quality signals with a measurement of signal

transmission between the mobile station to base station based on this measurement

error estimates can be combined in the navigation –processing algorithm to estimate

the error in the determination if each positions. (Fig. #8 and #9 shows

compute/compare distance measurement / record and report error), [0013, 0015, 0065,

0071, 0080, 0083]). (Fig. #9 / inconsistent, element 122, [0083] the examiner broadly

interprets as analyzing discrepancy).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Vanderspool, such that identifying means for

identifying suspicious measurements by analyzing a discrepancy between the

measurement and the location estimate, to improve location calculations that are based

on location measurement data, and to reduce the location error and check for to throw

out bad measurements.

Regarding **claim 18**, the combination of Vanderspool and Riley teach in claim 17,

Vanderspool further teaches comprising a providing location services for a plurality of

client applications (C2, 60-64 of Vanderspool).

Regarding **claim 19**, the combination of Vanderspool and Riley teach in claim 17,

Vanderspool further teaches comprising a providing a gateway mobile location center

for providing said client application (C2, 29-34 / MLC=LSN=Gateway).

Regarding **claim 20**, the combination of Vanderspool and Riley teach in claim 12,

Vanderspool further teaches wherein the determining means comprises a calculating

means for calculating the location estimate based upon a measurement regarding a

position of the at least one mobile station relative to the at least one base station (C2,

39-46 of Vanderspool).

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Vu whose telephone number is (571)272-8131.

The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Trost can be reached on 571-272-7872. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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